

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1-29 (canceled).

30 (new). A photocurable composition comprising:

- (a) at least one photocurable monomer;
- (b) reactive particles comprising a crosslinked elastomeric core and a shell of reactive groups on an outer surface of the crosslinked elastomeric core wherein the reactive groups are epoxy groups, ethylenically unsaturated groups or hydroxy groups; and
- (c) at least one photoinitiator for polymerization of the photocurable monomer.

31 (new). The photocurable composition of claim 30 wherein the photocurable monomer comprises a cationically curable monomer and the photoinitiator comprises a cationic photoinitiator.

32 (new). The photocurable composition of claim 31 wherein the cationically curable monomer comprises a polyepoxide.

33 (new). The photocurable composition of claim 32 wherein the polyepoxide is an alicyclic polyepoxide having a monomer purity of greater than about 94%.

34 (new). The photocurable composition of claim 30 wherein the photocurable monomer comprises a radically curable monomer and the photoinitiator comprises a radical photoinitiator.

35 (new). The photocurable composition of claim 34 wherein the radically curable monomer comprises a poly(meth)acrylate.

36. (new). The photocurable composition of claim 35 wherein the poly(meth)acrylate is selected from the group consisting of a poly(meth)acrylate having at least one hydroxy group, a mono(meth)acrylate, a di(meth)acrylate and a poly(meth)acrylate containing at least three (meth)acrylate groups.

37 (new). The photocurable composition of claim 30 containing a cationically curable monomer, a radically curable monomer, a radical photoinitiator, and a cationic photoinitiator.

38 (new). The photocurable composition of claim 30 wherein the crosslinked elastomeric core comprises a crosslinked polysiloxane material,

39 (new). The photocurable composition of claim 38 wherein the crosslinked polysiloxane material comprises dialkylsiloxane repeating units.

40 (new). The photocurable composition of claim 39 wherein the dialkylsiloxane repeating units comprise dimethylsiloxane repeating units.

41 (new). The photocurable composition of claim 30 wherein the crosslinked elastomeric core comprises a polybutadiene material.

42 (new). The photocurable composition of claim 30 wherein the reactive particles have an average particle diameter ranging from 0.01 μm to 50 μm .

43 (new). The photocurable composition of claim 30 wherein the reactive particles are capable of reacting substantially completely to form chemical bonds to a polymer matrix that is formed on curing the photocurable composition.

44 (new). The photocurable composition of claim 30 further comprising a polyether polyol.

45 (new). A method for producing a solidified 3-D object comprising:

- (1) forming a first layer comprising a photocurable composition containing at least one photocurable monomer, at least one photoinitiator and reactive particles comprising a crosslinked elastomeric core and a shell of reactive groups on an outer surface of the crosslinked elastomeric core wherein the

reactive groups are epoxy groups, ethylenically unsaturated groups or hydroxy groups;

- (2) exposing the first layer to actinic radiation to form a hardened first layer;
- (3) forming a second layer comprising the photocurable composition on top of the hardened first layer
- (4) exposing the second layer to actinic radiation to form a hardened second layer; and
- (5) repeating steps (3) – (4) as needed to produce the solidified 3-D object.

46 (new). The method of claim 45 further comprising the step of postcuring the solidified 3-D object.

47 (new). The method of claim 45 wherein the first and second layers are formed by jet deposition or by a surface layer of a bath of the photocurable composition.

48 (new). The method of claim 45 wherein the solidified 3-D object is selected from the group consisting of an adhesive, a photoimageable coating, a coating for optical fibers, a 3-D object by printing or jetting, paint, a powder coating, a solder mask or a photoresist mask.

49 (new). A solidified 3-D object produced according to the process of claim 45.